

Remarks

Claims 92, 94-99, 101 and 106-108 are sought to be amended. Claims 109-117 are sought to be added. Claims 76-91, 100, and 105 have been canceled without prejudice or disclaimer. These changes do not introduce any new matter or raise any new issues requiring further search by the Examiner. Entry of these amendments is therefore respectfully requested. Applicants note that the claims have been amended to render them more definite and not to overcome any pending rejection or art. Based on the above amendments and the following remarks, Applicants respectfully request that the Examiner reconsider and withdraw all outstanding rejections, and that claims 92-99, 101-104 and 106-117 be passed to allowance.

I. Election/Restriction

The Examiner has restricted the claims into three groups. Applicants respectfully elect to prosecute Group II without traverse. Accordingly, claims 76-91 (Group 1) and claim 105 (Group III) have been canceled as outlined above. Applicants reserve the right to prosecute these claims in a divisional application.

II. Rejection of Claim 104 under 35 U.S.C. § 102

The Examiner has rejected claim 104 based on Reis *et al.* (EP 0,467,036) under 35 U.S.C. § 102. Applicants respectfully traverse this rejection. Reis *et al.* disclose that passive RFID tags have several inherent limitations at column 1, lines 33 to column 2, line 8. Furthermore, Reis *et al.* do not disclose that a reader performs multiple reads of passive RFIDs. The interrogator disclosed by Reis *et al.* does not perform multiple reads of the RFID tags to avoid time slot contention. As described at column 7, lines 29-37, the tag re-sends its ID code back to the interrogator if it does not receive an acknowledgment back from the interrogator. In contrast to the claimed invention, the interrogator does not make a second read of the RFID tag. Accordingly, Applicants submit that Reiss *et al.* does not anticipate claim 104. Applicants therefore respectfully request that the rejection be withdrawn and that claim 104 be passed to allowance.

III. Statement of Reasons for the Indication of Allowable Subject Matter

Applicants thank the Examiner for indicating that claim 92-103 and 106-108 are allowable. However, the Examiner's indication of allowable subject matter is far too narrow. The Examiner has focused incorrectly on one aspect of the claimed invention. Rather, the proper focus is on the claimed invention as a whole. It is the totality of the claim that makes this claim novel over the art of record and not merely the fact that tags respond with a secondary identification number.

IV. Conclusion

All of the Examiner's stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. The Examiner is invited to call the undersigned at the telephone number indicated below if such a call would facilitate the prosecution of this application.

Respectfully submitted,

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Version with markings to show changes made

In the Specification:

Please amend page 1 as follows:

This application is a continuation of application no. 08/975,969, filed November [27] 21, 1997 [(allowed)], which is now U.S. Patent No. 6,002,344.

In the Claims:

Please amend the claims as follows:

92. (Amended) An automated, real-time electronic inventory system, comprising:

- (A) a plurality of passive radio frequency identification (RFID) tags, wherein each tag is assigned a first permanent identification number and a second permanent identification number, wherein said passive RFID tags are configured to receive and transmit signals; and
- (B) a tag reader having means for transmitting a signal to said passive RFID tags and means for resolving contention [resolution] between multiple RFID tags that respond to said signal;
- (C) wherein said passive RFID tags [is] are configured to receive [a] said signal from said reader, evaluate said signal relative to said first [and] or second permanent identification numbers, and reply to said signal if appropriate.

94. (Amended) The electronic inventory system of claim 92, wherein said signal is a clock signal, and said tag reader emits a series of clock signals, wherein each clock signal defining a time slot.

95. (Amended) The electronic inventory system of claim 94, wherein each passive RFID tag counts [the] said clock signals and when the count is equivalent to said first permanent identification number, transmits its [identification ID] reply to said tag reader.

96. (Amended) The electronic inventory system of claim 95, wherein said tag reader accumulates [the identification numbers] said replies of each tag that responded.

97. (Amended) The electronic inventory system of claim 96, wherein said tag reader polls all tags [that responded] whose reply conflicted with another tag.

98. (Amended) The electronic inventory of claim 92, wherein said first and second permanent identification numbers are a tag identification number (Tag ID) and a manufacturer number, wherein said signal is a clock signal, wherein each tag further comprises:

means for receiving a wake-up signal followed by a first clock signal;
means for incrementing a first tag count in response to said first clock signal;
means for transmitting [the] said Tag ID assigned to [the] said tag when said Tag ID corresponds to said first tag count;
means for receiving a second clock signal;
means for incrementing a second tag count in response to said second clock signal; and
means for transmitting [the] said manufacturer number assigned to [the] said tag when said manufacturer number of said [each] tag corresponds to said second count.

99. (Amended) The electronic inventory of claim 92, wherein said first and second permanent identification numbers are a tag identification number (Tag ID) and a manufacturer number, wherein said signal is a clock signal, wherein said tag reader comprises:

means for transmitting a wake-up signal followed by a first clock signal;
means for incrementing a first reader count in response to said first clock signal,

means for receiving a Tag ID transmitted by a tag in response to said first clock signal;

means for storing a given first reader count when more than one tag responds to said first clock signal that corresponds to said given first reader count;

means for transmitting said given first reader count followed by a second clock signal; and

means for receiving a manufacturer number transmitted by a tag in response to said second clock signal.

101. (Amended) An automated, real-time electronic inventory system, comprising:

- (A) a plurality of passive radio frequency identification (RFID) tags, wherein each tag is assigned a plurality of identification numbers, wherein said RFID tags are configured to receive and transmit signals; and
- (B) a tag reader having means for transmitting a signal to said passive RFID tags and means for resolving contention resolution between multiple RFID tags that respond to said signal;
- (C) wherein said RFID tags [is] are configured to receive a signal from said reader, evaluate one or more of said plurality of identification numbers, and reply to said signal if appropriate.

106. (Amended) A system for locating a tag, wherein each tag is assigned a first permanent identification number and a second permanent identification number, the system comprising:

a tag reader configured to transmit a first value corresponding to the first permanent identification number of a tag to be located and a second value corresponding to the second permanent identification number of a tag to be located ; and

a tag that transmits, in response to receiving said first value, the first permanent identification number assigned to said tag when the first permanent identification number assigned to said tag corresponds to said first value, wherein said tag further transmits, in response to receiving said second value, the second permanent identification number

assigned to said tag when the second permanent identification number assigned to said tag corresponds to said second value.

107. (Amended) A radio frequency identification tag, wherein each tag is assigned a first permanent identification number and a second permanent identification number, wherein the tag is interrogated by a tag reader having means for transmitting a first clock signal and for incrementing a first reader count in response to the first clock signal, means for storing the first reader count when more than one tag responds to the first clock signal that corresponds to the first reader count, and means for transmitting the stored first reader count followed by a second clock signal, the tag comprising:

means for incrementing a first tag count in response to the first clock signal, and means for transmitting the first permanent identification number assigned to the tag when the permanent identification number of the tag corresponds to said first tag count,

means [, responsive to a determination that the transmitted first reader count corresponds to the first permanent identification number assigned to the tag,] for incrementing a second tag count in response to receiving the at least one second clock signal, and

means for transmitting the second permanent identification number assigned to the tag when the second permanent identification number of the tag corresponds to said second tag count.

108. (Amended) A method for conducting an inventory of tags, wherein each tag is assigned a first permanent identification number and a second permanent [identifications] identification number, the method comprising the steps of:

at a tag reader, transmitting a first clock signal, waiting for a reply from a plurality of the tags, and transmitting a first reader count followed by a second clock signal; and

at each tag,

incrementing a first tag count in response to said first clock signal and

transmitting the first permanent identification number assigned to said tag when the first permanent identification number of said tag corresponds to said first tag count; at each tag that responds to said transmitted first reader count, incrementing a second tag count in response to said second clock signal, and transmitting the second permanent identification number assigned to said tag when the second permanent identification number of said tag corresponds to said second count.

Please add the following new claims:

109. (New) A method for conducting an electronic inventory of radio frequency identification tags, the method comprising the steps of:

- (A) transmitting a first signal to a plurality of passive radio frequency identification (RFID) tags, wherein each tag is assigned a first identification number and a second identification number, wherein said RFID tags are configured to receive and transmit signals; and
- (B) receiving a reply from said plurality of passive RFID tags, said tags responding to said first signal based on the value of said first identification number;
- (C) resolving contention between multiple RFID tags if there is a conflict between at least two of said RFID tags subsequent to said RFID tags responding to said first signal, including transmitting a second signal to said plurality of passive RFID tags.

110. (New) The method of claim 109, wherein at least one of said RFID tags includes a sensor, the method further including receiving sensor data from at least one RFID tag.

111. (New) The method of claim 109, further comprising receiving a reply to said second signal from at least one RFID tag based on the value of said second identification number.
112. (New) The electronic inventory system of claim 92, wherein at least one of said plurality of passive RFID tags are manufactured on a flexible substrate.
113. (New) The electronic inventory system of claim 101, wherein at least one of said plurality of passive RFID tags are manufactured on a flexible substrate.
114. (New) The system of claim 106, wherein said tag includes a sensor.
115. (New) The system of claim 106, wherein said tag is manufactured on a flexible substrate.
116. (New) The tag of claim 107, wherein the tag further includes a sensor.
117. (New) The tag of claim 107, wherein the tag is manufactured on a flexible substrate.

Please cancel claims 76-91, 100, and 105 without prejudice or disclaimer.